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# Storm Water Permit Requirements for Land Disturbance Activities

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Water Protection Program technical bulletin

4/2004

## The Issue

Human activities, such as urbanization, alter drainage patterns and add pollutants to our rivers, wetlands, lakes and streams. Recent studies show that storm water runoff is a major source of water pollution. Polluted water endangers bodies of water used for drinking, household purposes, recreation and fishing.

Soil sediment that erodes from a construction activity is a large contributor to water pollution. Storm water not only carries soil particles, a major pollutant; but can also carry attached pollutants such as petroleum products, metals, chemicals, pesticides, nutrients and bacteria.

Sediment loading rates from construction sites are typically 10 to 20 times greater than pre-construction rates (North Carolina Department of Environment, Health and Natural Resources, 1993). Over a short period of time, construction sites can contribute more sediment to receiving streams than was previously deposited over several decades.

## Background

Since October 1992, the Missouri Department of Natural Resources has regulated the quality of storm water runoff by requiring a land disturbance or storm water permit. The regulations address pollution in storm water runoff that is discharged from certain industrial sites, construction sites disturbing an area of one acre or more and urban storm sewers. The regulations came about because of amendments to the federal Clean Water Act, originally passed in 1972.

## Exemptions

The following is a list of activities that are exempt from permit requirements:

- Certain linear, strip or ribbon construction, or maintenance operations such as grading existing roadways or cleaning existing road ditches. Also, trenches less than 2 feet in width, along with any emergency repairs or replacement to any existing facilities, as long as best management practices are employed. See 10 CSR 20-6.200 (8)(A-D) for specifics.
- Sites that disturb less than one acre of total land area that are not part of a common plan or sale and that do not cause any violations of water quality standards and are not otherwise designated by the department as requiring a permit.
- Farmlands, domestic gardens, or lands used for sludge management where domestic sludge is beneficially used and which are not physically located in the confines of the producing facility.



- Mowing, brush hog clearing, tree cutting or similar activities which do not grade, dig, excavate or otherwise remove or kill the surface growth and root system of the ground cover.
- Agricultural storm water discharges and irrigation return flows. For purposes of this permit, land disturbance activities from Class I Concentrated Animal Feeding Operations (CAFO) are not considered an agricultural activity and are therefore not exempted.

## **Permit Requirements**

An Operating Permit is required when construction activity disturbs land by grubbing, grading, excavating or otherwise destroying or disturbing the root zone, and the surface area disturbed is one acre or more. The one acre includes all land disturbance activities that are part of a common plan or sale. The law applies to the total land area disturbed over the life of the project. Land disturbances that were started prior to March 2003 may still require a permit if the site has not been stabilized. Missouri regulations (10 CSR 20-6.200) should be consulted for specific requirements.

Developers/Landowners who are developing land within Missouri need to apply for a land disturbance storm water permit. The four types of storm water permits are listed below. An Operating Permit must be obtained before any site vegetation is removed or the site is disturbed. A plan indicating how erosion, sedimentation and other pollutants will be controlled on the site must be developed for the site before a permit can be issued.

### **Land Disturbance by a Government Authority with an Approved Erosion Control Plan (permit number MO-R1000)**

This permit covers land disturbance activities that impact one acre or more and that are performed by or under contract to a city, county or state government agency with a storm water control program approved by the Missouri Department of Natural Resources.

This permit requires that all construction activities conform to the local or government agency storm water control plans. The local government agency should apply to the department for the permit and to seek approval for an approved plan.

A list of active sites of land disturbance greater than one acre shall be provided quarterly to the department. This list shall contain the name of the project, location, receiving stream(s) for each outfall, description of the project, number of acres disturbed and progress toward completion of the project, expressed as a percentage. The reports shall be submitted each January, April, July and October by the first of the month.

### **Land Disturbance within a Governmental Unit with an Approved Erosion Control Plan (permit number MO-R100A)**

This permit covers land disturbance activities that impact one acre or more and that are performed within a city or county with a storm water control program approved by the department.

First apply to the local authorities, usually the city or county planning or engineering department, for their permit requirements. Submit a copy of the local permit or approval letter with your application to the department. Some local authorities will send your application or the approval letter directly to the department. Contact the department or the local authority to determine if

your site is within a city or county with a department approved plan. Storm water sampling is not required unless it is specified in the local plan.

**Land Disturbance of One Acre or More (permit number MO-R101000)**

This is a general permit that authorizes discharges from land disturbances that impact one acre or more and are not covered under either of the permits described above.

This permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be developed before any site vegetation is removed or disturbed and before a permit can be issued. The SWPPP should not be submitted with the application unless specifically requested.

The SWPPP requires that the permittee use Best Management Practices (BMPs) on site to reduce the amount of sediment and other pollutants in the storm water associated with the land disturbance activities. The permittee must fully implement the provisions of the SWPPP required under this general permit throughout the term of the land disturbance project. For further details on the applicability and the SWPPP best management practice requirements, see the Requirements and Guidelines section of your general permit and the SWPPP section of this technical bulletin.

**Land Disturbances within Valuable Water Resource Areas (permit number MO-R109000)**

This permit covers land disturbance activities that impact one acre or more that are near valuable water resources. These areas are

- Within 1,000 feet of a lake used primarily as a public water supply,
- outstanding resource waters, such as cold water trout streams,
- lakes participating in EPA's "Clean Lakes Program", at or within 100 feet of major reservoirs or permanent streams (except the Missouri or Mississippi Rivers); and
- sinkholes, losing streams or other direct conduits to groundwater.

This permit also requires the development of a SWPPP. Please see the SWPPP requirements section of this technical bulletin. The specific permit requirements for all of the above listed Land Disturbance permit types include

- Clearing and grubbing within 50 feet from a stream or drainage area should be avoided.
- Where changes to defined drainage areas occur as part of the project, clearing and grubbing within 50 feet of a drainage area should be delayed until all materials and equipment necessary to protect and complete the drainage change are on site.
- Changes to defined drainage courses shall be completed as quickly as possible once the work has been initiated.
- The area impacted by the land disturbance of the drainage course change is to be revegetated or protected from erosion as soon as possible.
- Areas within 50 feet of defined drainage ways should be recontoured as needed and revegetated, seeded or otherwise protected within five working days after grading has ceased.
- Work in defined drainages or water courses may require a permit from the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act.

There are no regular sampling requirements in the permits. However, the department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations or other such evidence of off-site contamination from activities at the site. If such

an action is needed, the department will specify any additional sampling requirements in writing, including such information as location, extent and parameters. These general storm water permits are not transferable. The existing permittee who intends to transfer ownership of a lot or parcel of the overall permitted area is still responsible for the terms of the permit and erosion control on that site unless the new owner applies for and receives a land disturbance general permit or other department operating permit for storm water discharges from land disturbance activities.

Permittee shall maintain records at a site that is readily available from the permitted site until final stabilization of the site is achieved. The permittee shall retain copies of the general permit, the SWPPP and all amendments for the site named in the State Operating Permit, results of any monitoring and analysis and all site inspection records required by a general permit. The records shall be retained for a period of at least three years from the date of the Letter of Termination from the department.

## **Storm Water Pollution Prevention Plan**

Storm Water Pollution Prevention Plans are to ensure the design, implementation, management and maintenance of Best Management Practices in order to reduce the amount of sediment and other pollutants in storm water discharges associated with land disturbance activities; comply with the Missouri Water Quality Standards; and ensure compliance with the terms and conditions of the general land disturbance permit.

The SWPPP must include the following at a minimum:

- A site and physical condition description.
- How the drainage area will be protected.
- Description of BMPs that will be used.
- How the disturbed area will be protected from erosion.
- Locations at the site where BMPs will be installed.
- A description of the types of temporary and permanent non-structural BMPs that will be used.
- A description of the types of temporary and permanent structural BMPs that will be used.
- Location of the sedimentation basin for each drainage area with 10 or more acres disturbed at one time.
- Additional Site Management BMPs to be used, such as solid and hazardous waste management, provision of portable toilets, proper storage of construction materials, installation of containment berms and use of drip pans at petroleum product and liquid storage tanks and containers.
- The types of permanent storm water management that will be installed.

Please note that the SWPPP must be amended or updated as appropriate during the term of the land disturbance activity.

## **Best Management Practices**

Best management practices for storm water control cover a wide range of methods and techniques. The following is a list showing some of the more common BMPs:

- Site planning
- Silt fencing
- Straw bales
- Rock dams
- Mulching

- Temporary berms
- Sediment basins
- Temporary seeding
- Permanent seeding
- Maintain vegetation

For more complete coverage of possible best management practices refer to the following documents:

**Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices**, (Document No. EPA 832-R-92-005) published by the U.S. Environmental Protection Agency (USEPA) in September 1992.

**Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri**, published by the Missouri Department of Natural Resources in November 1995.  
[www.dnr.mo.gov/wpscd/wpcp/wpcp-guide.htm](http://www.dnr.mo.gov/wpscd/wpcp/wpcp-guide.htm)

The two resources listed above contain information from the **Field Office Technical Guide (FOTG), Section 4, Practice Standards and Specifications**, published by the U.S. Department of Agricultural, Natural Resources Conservation Service (NRCS). Copies may be obtained by contacting your local NRCS office.

## **Fees and Application Forms**

To obtain current application forms and fee information, call or write to  
 Missouri Department of Natural Resources  
 Water Protection Program  
 P. O. Box 176  
 Jefferson City, MO 65102-0176  
 1-800-361-4827 or (573) 751-1300 (office)  
[www.dnr.mo.gov/wpscd/wpcp](http://www.dnr.mo.gov/wpscd/wpcp)

Or contact the regional office in your area. You can do that by calling 1-800-361-4827 or visit our Web site at [www.dnr.mo.gov/regions/deqregions.htm](http://www.dnr.mo.gov/regions/deqregions.htm).

## **For More Information Contact**

Missouri Department of Natural Resources  
 Environmental Assistance Office  
 P.O. Box 176  
 Jefferson City, MO 65102  
 1-800-361-4827 or (573) 526-6627 office  
 (573) 526-5808 fax  
[www.dnr.mo.gov/oac/env\\_assistance.htm](http://www.dnr.mo.gov/oac/env_assistance.htm)